

ABSTRACT OF THE DISCLOSURE

A stator assembly for an electric motor includes a stator housing, an expandable flux ring inserted into the stator housing and a plurality of magnets on an inner surface of the flux ring. Overmold material is molded around the magnets in the flux ring, such as by injection molding. The pressure of the overmold material as it is being molded expands the flux ring pressing the flux ring into engagement with the stator housing. The overmold material secures the magnets to the flux ring and the flux ring to the housing. One of the flux ring and stator housing has a dimple that engages a hole in the other of the flux ring and stator housing to align the flux ring and stator housing. In an aspect, the overmold material is molded to form at least one of a commutator end or rear bearing support, front bearing support and fan baffle. In an aspect, the overmold material is molded to form a keying feature. The keying feature can be slots of different widths between magnetic poles of the stator assembly. In an aspect, the flux ring and housing are preformed as a unit by stamping them from blanks and rolling them together. In a variation, the flux ring blank is rolled first to form the flux ring and the housing blank rolled around the flux ring with the flux ring acting as a rolling arbor.